(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
1 April 2004 (01.04.2004)

PCT

(10) International Publication Number
WO 2004/027597 A3

(51) International Patent Classification[7]: G06F 7/72

(21) International Application Number:
PCT/IB2003/003949

(22) International Filing Date:
10 September 2003 (10.09.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0221837.8 20 September 2002 (20.09.2002) GB

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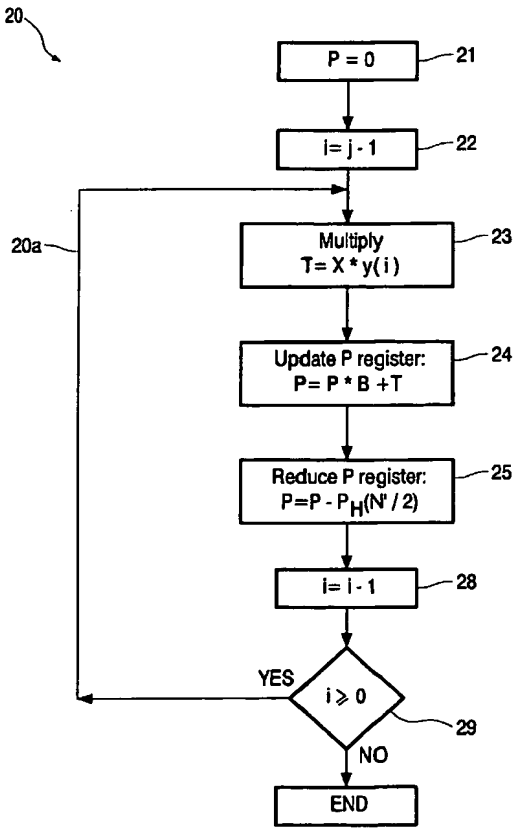
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,

[Continued on next page]

(54) Title: QUISQUATER REDUCTION



(57) Abstract: A method and apparatus for calculating the product P of a first number X and a second number Y, modulo N, where Y is partitioned into j words each of length p bits, and has a length (m + n) bits, cyclically operates on successive ones of the j words of Y, carrying out intermediate modulo reductions of the intermediate products formed. A specially selected multiple, N', of N is used so that only a single reduction of the intermediate based on N' guarantees that the intermediate product P is never longer than (m+n) bits at the end of each cycle. N' is an integer multiple of N, and the value N' is selected such that the (m - 1) most significant bits are equal to '1', and the least significant bit is '0'.

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SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:
11 November 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

International Application No
:T/IB 03/03949

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06F7/72

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 366 673 B1 (VAN DIJK MARTEN E ET AL) 2 April 2002 (2002-04-02) abstract column 3, line 1 - column 6, line 9	1-15
A	ORTON G ET AL: "A DESIGN OF A FAST PIPELINED MODULAR MULTIPLIER BASED ON A DIMINISHED-RADIX ALGORITHM" JOURNAL OF CRYPTOLOGY, NEW YORK, NY, US, vol. 5, 1992, pages 183-208, XP000669945 abstract figures 1,4	1-15
A	DE 101 42 155 C (INFINEON TECHNOLOGIES AG) 23 May 2002 (2002-05-23) abstract page 6, line 59 - page 7, line 37 page 8, line 15 - page 9, line 52 figures 4-7	1-15

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
7 September 2004	04/10/2004

Name and mailing address of the ISA	Authorized officer
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